IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Goddard et al. (as amended)
Appl. No.	:	10/036,063
Filed	:	December 26, 2001
For	:	ANTIBODIES TO POLYPEPTIDES THAT INDUCE CELL PROLIFERATION (as amended)
Examiner	:	Kolker, Daniel E.
Group Art Unit	:	1649

DECLARATION UNDER 37 CFR §1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

We declare and state as follows:

1. We are the inventors of the invention claimed in the above-captioned patent application.

2. During the time period in which we participated in the events and activities described herein, we were employed by Genentech, Inc., the assignee of the above-captioned application.

3. All of the events and activities described herein were performed by us personally, or by others at our direction as part of our duties as employees of Genentech, Inc.

4. The claimed antibodies and the proteins to which the claimed antibodies bind were conceived and reduced to practice in the United States prior to November 10, 1999 as described below.

5. Prior to November 10, 1999, we conceived of the invention claimed in the above-captioned patent application. This is demonstrated by the disclosure set forth in U.S. Provisional Patent Application No. 60/130,359, filed April 21, 1999, which describes the nucleic acid of SEQ ID NO: 56, the polypeptide of SEQ ID NO: 57, and the claimed antibodies to SEQ ID NO: 57. In addition, the attached sequence printout (Exhibit A), which was generated prior to November 10, 1999, shows the complete sequence of the nucleic acid having the sequence of SEQ ID NO: 56. The attached printout also shows the complete sequence of the polypeptide which has the sequence of SEQ ID NO: 57, to which the claimed antibodies bind. As evidenced by the provisional application and the sequence printout, we were in possession of the complete nucleic acid sequence, the complete amino acid sequences, and antibodies that bind to SEQ ID NO: 57 prior to April 21, 1999.

6. The date deleted from Exhibit A is prior to November 10, 1999. This date was redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.

7. After the initial experiments resulting in the sequences listed in the attached printout, we diligently reduced to practice the polypeptides to which the claimed antibodies bind by working to express and purify the encoded polypeptide and to run it systematically through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on April 20, 1999 and assigned ATCC no. 203948. The protein of interest was assigned a "protein inventory number" (*e.g.*, PIN1205-1), and this protein is the polypeptide having the sequence of SEQ ID NO:57, and is encoded by SEQ ID NO: 56.

8. Exhibit B shows that the protein lot designated PIN1205-1 was delivered to James Pan on a date prior to November 10, 1999 in order to perform assay ASY92, called "Mouse Mesangial Cell proliferation Assay." Also, as shown in Exhibit B, the assay was completed on a date prior to November 10, 1999. Exhibit B also shows that the tested polypeptides tested positive ("All Positives"), thereby confirming the ability of the encoded polypeptide to induce mesangial cell proliferation. Thus, SEQ ID NO: 57 and antibodies that bind thereto were reduced to practice on a date prior to November 10, 1999.

9. The dates deleted from Exhibit B all are prior to November 10, 1999. These dates were redacted pursuant to M.P.E.P. § 715.07. The date that remains is the date the report was printed, April 28, 2005.

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: A. Goddard
Audrey Goddard

Date: 6/25/07

By: _____
Paul J. Godowski

Date: _____

By: _____
Austin L. Gurney

Date: _____

By: _____
James Pan

Date: _____

By: _____
Colin K. Watanabe

Date: _____

By: _____
William I. Wood

Date: _____

3905026
062007

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: 6/29/07
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: _____
James Pan

By: _____ Date: _____
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

3905026
062007

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: _____
Paul J. Godowski

By: _____ Date: 7/7/07
Austin L. Gurney

By: _____ Date: _____
James Pan

By: _____ Date: _____
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

3905026
062007

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: _____
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: June 22/07
James Pan

By: _____ Date: _____
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

3905026
062007

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: _____
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: _____
James Pan

By: Colin K. Watanabe Date: 6/27/2007
Colin K. Watanabe

By: _____ Date: _____
William I. Wood

3905026
062007

11. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____ Date: _____
Audrey Goddard

By: _____ Date: _____
Paul J. Godowski

By: _____ Date: _____
Austin L. Gurney

By: _____ Date: _____
James Pan

By: _____ Date: _____
Colin K. Watanabe

By: William I Wood Date: 6/25/07
William I. Wood

3905026
062007

EXHIBIT A

>Thursday, April 28, 2005
>DNA92234 [Full]
>887 Sites [All Sites]
> [DNA92234], sheldens
> Lib309
>Sequence confirmed by phredphrap

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                                   sphI   fnuDII/mvnI                  mnlI
                                   nspHI  bstUI taiI                  taqI
                                taiI  nspI   bsh1236I                 xhoI
                                maeII/hpyCH4IV bsiWI/splI      tsp509I[M.ecoRI-]
                          aluI  hinlI/acyI cac8I   bseAI       ecoRI    tliI
       tsp45I      sapI       ahaII/bsaHI  mluI rsaI       hpy188I     smlI
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                                                                    ^insert starts here
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                                                 mspI
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               aluI                  mnlI  mboII  bsaJI   maeII/hpyCH4IV               mseI maeIII              nla
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                                                                              sau3AI
                                                                              mboI/ndeII[dam-]
                                                                              dpnII[dam-]
                                                                              dpnI[dam+]
                                                                              alwI[dam-]
                                                                            nlaIV
      pleI                                               mnlI               bstYI/xhoII                    hgaI
      mlyI                                             rmaI                 bamHI bslI                   tseI
      hinfI                                            maeI      hpy188I bstXI   alwI[dam-]  hpy188III   fnu4HI/bso
    bsmFI  mnlI            mnlI                        bfaI    eco57I  bpmI/gsuI[dcm-]  bslI  avaI       bbvI bsmFI
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    ACCCTGAGGG AGACGGTGTA AAAAACCTCC AACCCTTTCA ACGATCTCCG AAGTCTTGAG GTCGGATTAC CTAGGGTTTG AGCCCTCTTA CCGACGCAGG
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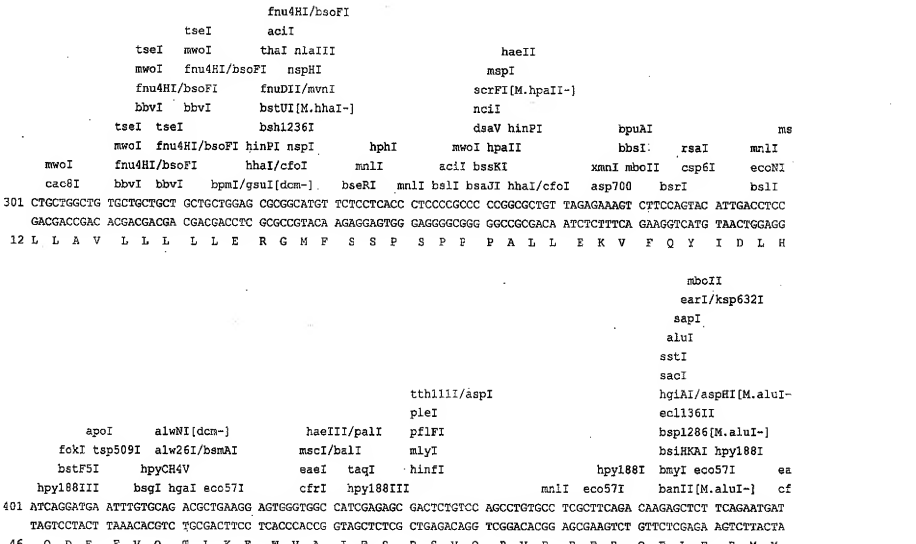
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sapI
aluI
sstI
sacI
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bstF5I hpyCH4V eaeI taqI hinfI hpy188I bmyI eco57I ea
hpy188III bsgI hgaI eco57I cfrI hpy188III mnlI eco57I banII[M.aluI-] cf
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TAGTCCTACT TAAACACGTC TGCGACTTCC TCACCCACCG GTAGCTCTCG CTGAGACAGG TCGGACACGG AGCGAAGTCT GTTCTCGAGA AGTCTTACTA
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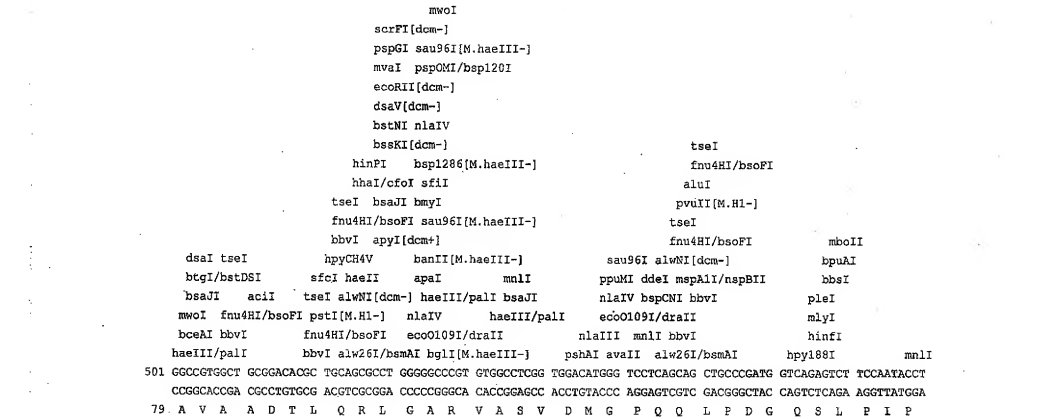
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hinfI
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                fokI  cfrI   bsrI         dpnI[dam+]  nlaIV                cfrI        maeII/hpyCH4IV    bssKI
                bstF5I haeIII/palI        alwI[dam-]  banI       mwoI    bceAI       btrI hpyCH4V        bsaJI
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      nlaIV                  accI                     mnlI   mcrI          haeIII/palI       dpnI[dam+]      hh
      avaII                mnlI                       bseRI  bsiEI        eco0109I/draII    alwI[dam-]      hae
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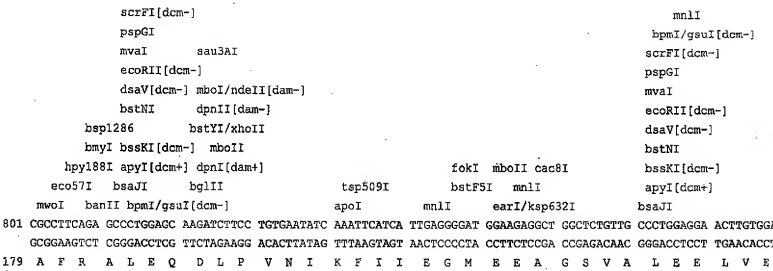
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mnlI
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       sau96I   mboII                                  hpy188I        dpnI[dam+]                              avaI[M.
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                                                  bsmAI            hpy188III         fokI   rcaI           mboI/ndeII[da
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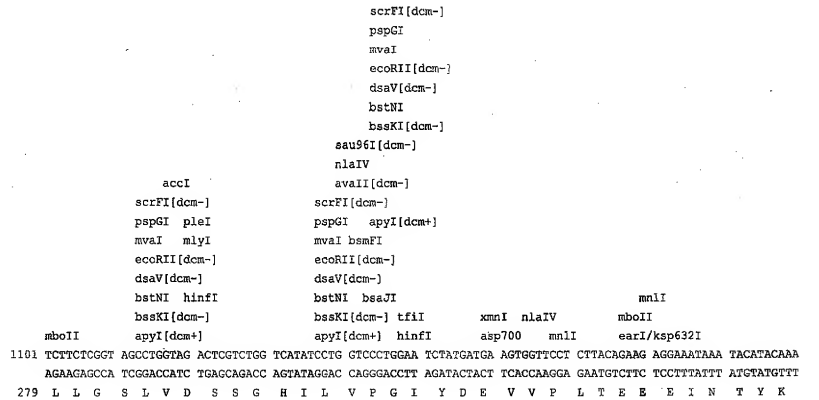
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          mboI/ndeII[dam-][M.taqI-]                dsaV[dcm-]
          dpnII[dam-]           dsaV[dcm-]         bstNI          tsp509I      bsm
          dpnI[dam+]            bstNI              bssKI[dcm-]   apoI          rmaI
          alwI[dam-] bsh1236I   bssKI[dcm-]        apyI[dcm+]   xmnI           maeI
       nlaIII  taqI[dam-]       apyI[dcm+]  bst4CI/hpyCH4III    asp700         bfaI
1301 CATCTCTTTC TATTCATGGG ATCGAGGGCG CGTTTGATGA GCCTGGAACT AAAACAGTCA TACCTGGCCG AGTTATAGGA AAATTTTCAA TCCGTCTAGT
     GTAGAGAAAG ATAAGTACCC TAGCTCCCGC GCAAACTACT CGGACCTTGA TTTTGTCAGT ATGGACCGGC TCAATATCCT TTTAAAAGTT AGGCAGATCA
346   S  L  S   I  H  G   I  E  G  A   F  D  E   P  G  T   K  T  V  I   P  G  R   V  I  G   K  F  S  I   R  L  V
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                                                                                                               pl
        nlaIII                       tsp45I                                                                    ml
      mslI                           maeIII         mboII               xmnI                                   hi
    mnlI mslI          aciI         hphI         hpy188III              asp700     bstXI                    nlaII
1401 CCCTCACATG AATGTGTCTG CGGTGGAAAA ACAGGTGACA CGACATCTTG AAGATGTGTT CTCCAAAAGA AATAGTTCCA ACAAGATGGT TGTTTCCATG
     GGGAGTGTAC TTACACAGAC GCCACCTTTT TGTCCACTGT GCTGTAGAAC TTCTACACAA GAGGTTTTCT TTATCAAGGT TGTTCTACCA ACAAAGGTAC
 379 P  H  M   N  V  S  A   V  E  K   Q  V  T   R  H  L  E   D  V  F   S  K  R   N  S  S  N   K  M  V   V  S  M

                                                                                         tspRI
                                                                                  hpy188I                     sau
                                                                   mwoI          sau3AI  bst4CI/hpyCH4III     mbo
      rmaI         dsaI                                           tseI          mboI/ndeII[dam-]             dpn
      maeI         btgI/bstDSI  sspI                              fnu4HI/bsoFI  dpnII[dam-]                  dpn
      bfaI         bsaJI    hpyCH4V                  bsrI         bbvI          dpnI[dam+]                   alw
1501 ACTCTAGGAC TACACCCGTG GATTGCAAAT ATTGATGACA CCCAGTATCT CGCAGCAAAA AGAGCGATCA GAACAGTGTT TGGAACAGAA CCAGATATGA
     TGAGATCCTG ATGTGGGCAC CTAACGTTTA TAACTACTGT GGGTCATAGA GCGTCGTTTT TCTCGCTAGT CTTGTCACAA ACCTTGTCTT GGTCTATACT
 412 T  L  G  L   H  P  W   I  A  N   I  D  D  T   Q  Y  L   A  A  K   R  A  I  R   T  V  F   G  T  E   P  D  M  I
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           sau3AI
           mboI/ndeII[dam-]
           dpnII[dam-]                           sau3AI
      fokI dpnI[dam+]                        scrFI[dcm-]
      bstF5I                                 pspGI  mboI/ndeII[dam-]
    scrFI[M.hpaII-]                          mvaI   dpnII[dam-]
    nciI   alwI[dam-]                        ecoRII[dcm-]
    mspI   nlaIV                             dsaV[dcm-]
    hpaII  bstYI/xhoII                       bstNI  dpnI[dam+]                  mspA1I/nspBII
    dsaV   bamHI           tsp509I           bssKI[dcm-]                    tsp509I
    bssKI  alwI[dam-]      munI/mfeI         apyI[dcm+]                 mwoI    aciI   aluI
1601 TCCGGGATGG ATCCACCATT CCAATTGCCA AAATGTTCCA GGAGATCGTC CACAAGAGCG TGGTGCTAAT TCCGCTGGGA GCTGTTGATG ATGGAGAACA
     AGGCCCTACC TAGGTGGTAA GGTTAACGGT TTTACAAGGT CCTCTAGCAG GTGTTCTCGC ACCACGATTA AGGCGACCCT CGACAACTAC TACCTCTTGT
446   R  D  G   S  T  I   P  I  A  K   M  F  Q   E  I  V   H  K  S  V   V  L  I   P  L  G   A  V  D  D   G  E  H

                                                                                                    tru9I
                                                              tseI                            aluI  mseI
                                              nlaIV           fnu4HI/bsoFI               sau96I[M.haeIII-]
                                            mnlI        tsp509I bbvI        ddeI         haeIII/palI aseI/asnI/vspI
1701 TTCGCAGAAT GAGAAAATCA ACAGGTGGAA CTACATAGAG GGAACCAAAT TATTTGCTGC CTTTTTCTTA GAGATGGCCC AGCTCCATTA ATCACAAGAA
     AAGCGTCTTA CTCTTTTAGT TGTCCACCTT GATGTATCTC CCTTGGTTTA ATAAACGACG GAAAAAGAAT CTCTACCGGG TCGAGGTAAT TAGTGTTCTT
479  S  Q  N   E  K  I  N   R  W  N   Y  I  E   G  T  K  L   F  A  A   F  F  L   E  M  A  Q   L  H  O
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                   sau3AI
                   mboI/ndeII[dam-]
                   dpnII[dam-]
                   dpnI[dam+]
                 hpy188I                             rmaI
                sau3AI    tspRI                      maeI
            hpy188I  alwI[dam-]                     bslI
        rmaI    mboI/ndeII[dam-]      hphI          bslI                          tsp509I   rmaI
        maeI    dpnII[dam-]        tfiI    mnlI   fokI bfaI      fokI                 apoI       maeI     rsaI
        bfaI    dpnI[dam+]         hinfI[M.hphI-] bstF5I         bstF5I        hpy188III         bfaI     csp6I
1801 CCTTCTAGTC TGATCTGATC CACTGACAGA TTCACCTCCC CCACATCCCT AGACAGGGAT GGAATGTAAA TATCCAGAGA ATTTGGGTCT AGTATAGTAC
     GGAAGATCAG ACTAGACTAG GTGACTGTCT AAGTGGAGGG GGTGTAGGGA TCTGTCCCTA CCTTACATTT ATAGGTCTCT TAAACCCAGA TCATATCATG

                                                                                           sau96I
                                      sau3AI                                               nlaIV
                                      mboI/ndeII[dam-]                                     avaII      hpyCH4V
                                      dpnII[dam-]                                         ppuMI      bsgI
                 tru9I                dpnI[dam+]                                          eco0109I/draII
                 mseI               hpy188III                                           tru9I       tspRI
                ahaIII/draI    ecoRV   alwI[dam-]     sspI                              mseI bsmFI  btsI
1901 ATTTTCCCTT CCATTTAAAA TGTCTTGGGA TATCTGGATC AGTAATAAAA TATTTCAAAG GCACAGATGT TGGAAATGGT TTAAGGTCCC CCACTGCACA
     TAAAAGGGAA GGTAAATTTT ACAGAACCCT ATAGACCTAG TCATTATTTT ATAAAGTTTC CGTGTCTACA ACCTTTACCA AATTCCAGGG GGTGACGTGT
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                                                                  scrFI[dcm-]
                                                                  pspGI
                                                                  mvaI
                                                                  ecoRII[dcm-]
                                    tseI                          dsaV[dcm-]
                                cac8I                             bstNI
                            tseI    fnu4HI/bsoFI                  bssKI[dcm-]
                            fnu4HI/bsoFI                          apyI[dcm+]
                    smlI    bbvI    bbvI                        bslI      tfiI
                    mnlI    aluI    hpyCH4V                hpyCH4V  bsaJI     hinfI
2001 CCTTCCTCAA GTCATAGCTG CTTGCAGCAA CTTGATTTCC CCAAGTCCTG TGCAATAGCC CCAGGATTGG ATTCCTTCCA ACCTTTTAGC ATATCTCCAA
     GGAAGGAGTT CAGTATCGAC GAACGTCGTT GAACTAAAGG GGTTCAGGAC ACGTTATCGG GGTCCTAACC TAAGGAAGGT TGGAAAATCG TATAGAGGTT

                                                sau96I        tsp45I
                                                avaII       bssSI
                                                ppuMI     hgiAI/aspHI
                                                eco0109I/draII hpy188III                  sau3AI
                                    mspI        rmaI          bsp1286                     mboI/ndeII[dam-]
                    tsp509I         hpaII       maeI    smlI  bsiHKAI             fokI    dpnII[dam-]
                hpyCH4V             bsaWI       bfaI    mnlI  bmyI  maeIII        bstF5I  dpnI[dam+]
2101 CCTTGCAATT TGATTGGCAT AATCACTCCG GTTTGCTTTC TAGGTCCTCA AGTGCTCGTG ACACATAATC ATTCCATCCA ATGATCGCCT TTGCTTTACC
     GGAACGTTAA ACTAACCGTA TTAGTGAGGC CAAACGAAAG ATCCAGGAGT TCACGAGCAC TGTGTATTAG TAAGGTAGGT TACTAGCGGA AACGAAATGG

                        tru9I
                        mseI            bsmAI
                        aseI/asnI/vspI  bsaI    tspRI
2201 ACTCTTTCCT TTTATCTTAT TAATAAAAAT GTTGGTCTCC ACCACTGNCT CCCAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA
     TGAGAAAGGA AAATAGAATA ATTATTTTTA CAACCAGAGG TGGTGACNGA GGGTTTTTTT TTTTTTTTTT TTTTTTTTTT TTTTTTTTTT TTTTTTTTTT
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                                                  scrFI[M.hpaII-]
                                                  nciI
                                                  mspI
                                                  hpaII
                                                  dsaV
                                                  bssKI            sau96I rsaI
                                                 xmaI/pspAI       rsrII/cspI
                                                  smaI            mroI     nlaIV
                                    aciI          scrFI[M.hpaII-] cpoI    kpnI  hpyCH4V
                                   fnu4HI/bsoFI          taqI nciI          hpy188III csp6I
                                   haeIII/palI     sstI  salI  dsaV          bspMII   banI sfcI
                                  mcrI             sacI  hincII/hindII[M.taqI-] avaII[M.hpaII-]
                                  eagI/xmaIII/eclXI aluI accI[M.taqI-]  tru9I mspI    asp718
                                  eaeI              hgiAI/aspHI[M.aluI-] mseI bspEI cfr10I/bsrFI
                                  cfrI       rmaI  ecl136II    bssKI  aseI/asnI/vspI  acc65I  cac8I
                                  bsiEI      maeI  bsp1286[M.aluI-] xmnI  tsp509I  bsaWI   pstI
                                 notI        bfaI  bsiHKAI     bsaJI tsp509I bsaWI ageI   sse8387I
                                fnu4HI/bsoFI      bmyI hpy99I avaI[M.hpaII-] hpaII mspI bspMI      rsaI
                                aciI       speI   banII[M.aluI-]   asp700   accIII hpaII sbfI      csp6I aluI    sf
2301 AAAAAAAAAA AAAAAAAAAA AAAGGGCGGC CGCCGACTAG TGAGCTCGTC GACCCGGGAA TTAATTCCGG ACCGGTACCT GCAGGCGTAC CAGCTTTCCC
     TTTTTTTTTT TTTTTTTTTT TTTCCCGCCG GCGGCTGATC ACTCGAGCAG CTGGGCCCTT AATTAAGGCC TGGCCATGGA CGTCCGCATG GTCGAAAGGG

          pleI
          mlyI
          hinfI        aluI
2401 TATAGTGAGT CGTATTAGAG CTTGG
     ATATCACTCA GCATAATCTC GAACC
```

> length: 2425

aatII(GACGTC):	25
acc65I(GGTACC):	1295 2374
accI(GTMKAC):	727 1117 2348
accIII(TCCGGA):	2366
aclI(CCGC):	86 332 355 511 1420 1672 2326 2330
acyI(GRCGYC):	25
aflIII(ACRYGT):	37
ageI(ACCGGT):	2371
ahaII(GRCGYC):	25
ahaIII(TTTAAA):	1914
aluI(AGCT):	19 48 110 485 569 1006 1680 1781 2016 2343 2392 2419
alw26I(CAGNNNCTG):	418 523 565
alwI(GGATCNNNN):	270 271 628 785 959 1319 1599 1609 1610 1817 1936
alwNI(CAGNNNCTG):	418 523 565
apaI(GGGCCC):	533
apoI(RAATTY):	54 409 841 1249 1381 1879
apyI(CCWGG):	528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
aseI(ATTAAT):	1787 2219 2360
asnI(ATTAAT):	1787 2219 2360
asp700(GAANNNNTTC):	375 1159 1379 1469 2358
asp718(GGTACC):	1295 2374
aspHI(GWGCWC):	484 2152 2342
aspI(GACNNNGTC):	451
avaI(CYCGRG):	62 280 995 2353
avaII(GGWCC):	559 705 909 1140 1985 2143 2369
balI(TGGCCA):	437
bamHI(GGATCC):	270 1609
banI(GGYRCC):	640 1295 2374

banII(GRGCYC):	484 533 809 2342
bbsI(GAAGACNNNNNN):	130 379 587
bbvI(GCAGC):	292 312 315 318 321 508 519 522 567 570 672 1235 1552 1756 2017 2024
bceAI(ACGGCNNNNNNNNNNNN):	502 656
bfaI(CTAG):	243 1210 1216 1396 1504 1805 1849 1889 2140 2337
bglI(GCCNNNNNGGC):	535
bglII(AGATCT):	822
bmyI(GDGCHC):	159 484 533 809 2152 2342
bpmI(CTGGAG):	96 258 325 814 883 1290
bpuAI(GAAGACNNNNNNN):	130 379 587
bsaAI(YACGTR):	42
bsaHI(GRCGYC):	25
bsaI(GGTCTCNNNNN):	1034 2234
bsaJI(CCNNGG):	139 359 503 528 545 684 812 881 995 996 1143 1516 2060 2353
bsaWI(WCCGGW):	1226 2127 2366 2371
bseRI(GAGGAGNNNNNNNNNN):	342 749 1270
bsgI(GTGCAG):	415 670 1994
bsh1236I(CGCG):	38 331 1329
bsiEI(CGRYCG):	755 2327
bsiHKAI(GWGCWC):	484 2152 2342
bsiWI(CGTACG):	40
bslI(CCNNNNNNNGG):	135 184 274 275 354 396 614 631 771 1847 1848 2060
bsmAI(GTCTC):	1034 2235
bsmAI(GTCTC):	1034 2235
bsmFI(GGGACNNNNNNNNNNNNNN):	143 202 297 1141 1399 1986
bsoFI(GCNGC):	85 292 312 315 318 321 332 508 519 522 567 570 672 1235 1552 1756 2017 2024 2326 2329
bsp120I(GGGCCC):	533
bsp1286(GDGCHC):	159 484 533 809 2152 2342
bspCNI(CTCAGNNNNNNNNNN):	563 1050

bspEI(TCCGGA): 2366
bspHI(TCATGA): 1074
bspMI(ACCTGC): 2377
bspMII(TCCGGA): 2366
bsrFI(RCCGGY): 2371
bsrI(ACTGGN): 384 618 1542
bssKI(CCNGG): 139 360 528 609 684 813 882 995 996 1038 1113 1137 1144 1239 1342 1363 1602 1638 2061 2353 2354
bssSI(CTCGTG): 2155
bst4CI(ACNGT): 643 1354 1573
bstAPI(GCANNNNNTGC): 641
bstDSI(CCRYGG): 503 1516
bstF5I(GGATG): 405 606 857 1068 1203 1605 1844 1857 2175
bstNI(CCWGG): 528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
bstUI(CGCG): 38 331 1329
bstXI(CCANNNNNNTGG): 260 1478
bstYI(RGATCY): 270 822 1609
btgI(CCRYGG): 503 1516
btrI(CACGTC): 667
btsI(GCAGTGNN): 1992
cac8I(GCNNGC): 31 35 303 675 868 975 2020 2381
cfoI(GCGC): 330 364 525 800 1328
cfr10I(RCCGGY): 2371
cfrI(YGGCCR): 437 500 611 657 1365 2327
cpoI(CGGWCCG): 2368
csp6I(GTAC): 41 387 1296 1897 2375 2387
cspI(CGGWCCG): 2368
ddeI(CTNAG): 563 1050 1265 1767
dpnI(GATC): 271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937 2183

dpnII(GATC):	271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937 2183
draI(TTTAAA):	1914
draII(RGGNCCY):	532 558 768 1984 2142
draIII(CACNNNGTG):	642
dsaI(CCRYGG):	503 1516
dsaV(CCNGG):	139 360 528 609 684 813 882 995 996 1038 1113 1137 1144 1239 1342 1363 1602 1638 2061 2353 2354
eaeI(YGGCCR):	437 500 611 657 1365 2327
eagI(CGGCCG):	2327
earI(CTCTTCNNNN):	15 487 862 1100 1177
ecl136II(GAGCTC):	484 2342
eclXI(CGGCCG):	2327
eco57I(CTGAAG):	250 424 474 489 804
ecoNI(CCTNNNNNAGG):	396
eco0109I(RGGNCCY):	532 558 768 1984 2142
ecoRI(GAATTC):	54
ecoRII(CCWGG):	528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
ecoRV(GATATC):	1929
fnu4HI(GCNGC):	85 292 312 315 318 321 332 508 519 522 567 570 672 1235 1552 1756 2017 2024 2326 2329
fnuDII(CGCG):	38 331 1329
fokI(GGATG):	405 606 857 1068 1203 1605 1844 1857 2175
gsuI(CTGGAG):	96 258 325 814 883 1290
haeII(RGCGCY):	363 524 799
haeIII(GGCC):	438 501 534 543 612 658 769 1366 1776 2328
hgaI(GACGC):	295 420
hgiAI(GWGCWC):	484 2152 2342
hhaI(GCGC):	330 364 525 800 1328
hinPI(GCGC):	330 364 525 800 1328

hincII(GTYRAC): 2348

hindII(GTYRAC): 2348

hinfI(GANTC): 204 451 585 914 1120 1148 1275 1500 1829 2070 2407

hinlI(GRCGYC): 25

hpaII(CCGG): 139 361 684 996 1227 1239 1602 2128 2354 2367 2372

hphI(GGTGA): 3 181 346 1023 1434 1832

hpy188I(TCNGA): 51 79 252 476 491 582 806 946 1568 1809 1814

hpy188III(TCNNGA): 97 281 402 443 1051 1074 1209 1289 1446 1873 1933 2156 2366

hpy99I(CGWCG): 27 2347

hpyCH4III(ACNGT): 643 1354 1573

hpyCH4IV(ACGT): 26 43 149 668

hpyCH4V(TGCA): 34 416 521 671 1030 1283 1524 1995 2023 2051 2104 2380

kpnI(GGTACC): 1295 2374

ksp632I(CTCTTCNNNN): 15 487 862 1100 1177

maeI(CTAG): 243 1210 1216 1396 1504 1805 1849 1889 2140 2337

maeII(ACGT): 26 43 149 668

maeIII(GTNAC): 4 180 1435 2158

mboI(GATC): 271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937
2183

mboII(GAAGA): 15 131 380 488 588 825 862 917 1101 1177 1219 1450

mcrI(CGRYCG): 755 2327

mfeI(CAATTG): 1622

mluI(ACGCGT): 37

mlyI(GAGTCNNNNN): 204 451 585 1120 1500 2407

mnlI(CCTC): 65 77 126 185 209 227 246 344 350 396 469 545 562 598 724 749 853
865 886 1021 1168 1180 1270 1287 1293 1324 1402 1738 1835 2005 2146

mroI(TCCGGA): 2366

mscI(TGGCCA): 437

mseI(TTAA): 175 1788 1915 1981 2220 2361

mslI(CAYNNNNRTG): 400 1405 1407

mspA1I(CMGCKG): 568 1672
mspI(CCGG): 139 361 684 996 1227 1239 1602 2128 2354 2367 2372
munI(CAATTG): 1622
mvaI(CCWGG): 528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
mvnI(CGCG): 38 331 1329
mwoI(GCNNNNNNNGC): 303 312 315 321 357 502 535 641 650 793 802 1555 1665
nciI(CCSGG): 139 360 684 995 996 1239 1602 2353 2354
ndeII(GATC): 271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937 2183
nlaIII(CATG): 32 199 336 555 1014 1075 1315 1407 1497
nlaIV(GGNNCC): 270 532 533 558 640 705 991 1054 1140 1164 1295 1609 1741 1985 2374
notI(GCGGCCGC): 2326
nspBII(CMGCKG): 568 1672
nspHI(RCATGY): 31 335
nspI(RCATGY): 31 335
paeR7I(CTCGAG): 62
palI(GGCC): 438 501 534 543 612 658 769 1366 1776 2328
pflFI(GACNNNGTC): 451
pleI(GAGTCNNNN): 204 451 585 1120 1500 2407
ppuMI(RGGWCCY): 558 1984 2142
pshAI(GACNNNNGTC): 553
pspAI(CCCGGG): 995 2353
pspGI(CCWGG): 528 609 813 882 1038 1113 1137 1144 1342 1363 1638 2061
pspOMI(GGGCCC): 533
pstI(CTGCAG): 520 2379
pvuII(CAGCTG): 568
rcaI(TCATGA): 1074
rmaI(CTAG): 243 1210 1216 1396 1504 1805 1849 1889 2140 2337
rsaI(GTAC): 41 387 1296 1897 2375 2387
rsrII(CGGWCCG): 2368

sacI(GAGCTC): 484 2342
salI(GTCGAC): 2348
sapI(GCTCTTCNNNN): 15 486 1099
sau3AI(GATC): 271 628 786 823 960 1090 1320 1566 1599 1610 1644 1812 1817 1937 2183
sau96I(GGNCC): 533 534 559 705 769 909 1140 1776 1985 2143 2369
sbfI(CCTGCAGG): 2378
scrFI(CCNGG): 139 360 528 609 684 813 882 995 996 1038 1113 1137 1144 1239 1342 1363 1602 1638 2061 2353 2354
sfaNI(GCATC): 1067
sfcI(CTRYAG): 10 520 2379 2400
sfiI(GGCCNNNNNGGCC): 534
smaI(CCCGGG): 995 2353
smlI(CTYRAG): 62 2006 2147
snaBI(TACGTA): 42
speI(ACTAGT): 2336
sphI(GCATGC): 31
splI(CGTACG): 40
sse8387I(CCTGCAGG): 2378
sspI(AATATT): 1528 1949
sstI(GAGCTC): 484 2342
taiI(ACGT): 26 43 149 668
taqI(TCGA): 63 443 1259 1322 2349
tfiI(GAWTC): 914 1148 1275 1829 2070
thaI(CGCG): 38 331 1329
tliI(CTCGAG): 62
tru9I(TTAA): 175 1788 1915 1981 2220 2361
tseI(GCWGC): 292 312 315 318 321 508 519 522 567 570 672 1235 1552 1756 2017 2024
tsp45I(GTSAC): 4 180 1435 2158
tsp509I(AATT): 55 410 842 942 1250 1382 1623 1668 1748 1880 2107 2359 2363

tspRI(NNCAGTGNN):	1574 1821 1992 2243
tth111I(GACNNNGTC):	451
vspI(ATTAAT):	1787 2219 2360
xbaI(TCTAGA):	1209
xhoI(CTCGAG):	62
xhoII(RGATCY):	270 822 1609
xmaI(CCCGGG):	995 2353
xmaIII(CGGCCG):	2327
xmnI(GAANNNNTTC):	375 1159 1379 1469 2358

not found:

aclI(AACGTT),afeI(AGCGCT),aflII(CTTAAG),ahdI(GACNNNNNGTC),alw44I(GTGCAC),apaLI(GTGCAC),ascI(GGCGCGCC),
avaIII(ATGCAT),aviII(TGCGCA),avrII(CCTAGG),baeI(NNNNNNNNNNNNNNNACNNNNGTAYCNNNNNNNNNNNNN),bbrPI(CACGTG),
bcgI(NNNNNNNNNNNNNCGANNNNNNTGCNNNNNNNNNNNN),bciVI(GTATCC),bclI(TGATCA),bfrBI(ATGCAT),bfrI(CTTAAG),blnI(CCTAGG),
blpI(GCTNAGC),bpu102I(GCTNAGC),bsaBI(GATNNNNATC),bsaXI(NNNNNNNNNNNNNACNNNNNCTCCNNNNNNNNNNN),bsiCI(TTCGAA),
bsmBI(CGTCTCNNNNN),bsmI(GAATGCN),bsp106(ATCGAT),bsp1407I(TGTACA),bspCI(CGATCG),bspDI(ATCGAT),bsrBI(GAGCGG),
bsrDI(GCAATGNN),bsrGI(TGTACA),bssHII(GCGCGC),bst1107I(GTATAC),bstBI(TTCGAA),bstEII(GGTNACC),bstZ17I(GTATAC),
bsu36I(CCTNAGG),celII(GCTNAGC),claI(ATCGAT),drdI(GACNNNNNNGTC),eam1105I(GACNNNNNGTC),eciI(GGCGGA),eco47III(AGCGCT),
eco72I(CACGTG),eco81I(CCTNAGG),eheI(GGCGCC),esp3I(CGTCTC),espI(GCTNAGC),fseI(GGCCGGCC),fspI(TGCGCA),hindIII(AAGCTT),
hpaI(GTTAAC),kasI(GGCGCC),kspI(CCGCGG),mamI(GATNNNNATC),mstII(CCTNAGG),naeI(GCCGGC),narI(GGCGCC),ncoI(CCATGG),
ndeI(CATATG),ngoMI(GCCGGC),nheI(GCTAGC),nruI(TCGCGA),nsiI(ATGCAT),pacI(TTAATTAA),pciI(ACATGT),pflMI(CCANNNNNTGG),
pmeI(GTTTAAAC),pmlI(CACGTG),ppu10I(ATGCAT),psiI(TTATAA),psp1406I(AACGTT),pvuI(CGATCG),sacII(CCGCGG),sanDI(GGGWCCC),
sauI(CCTNAGG),scaI(AGTACT),sceI(TAGGGATAACAGGGTAAT),sexAI(ACCWGGT),sfuI(TTCGAA),sgfI(GCGATCGC),sgrAI(CRCCGGYG),
snoI(GTGCAC),snoI(GTGCAC),srfI(GCCCGGGC),sstII(CCGCGG),stuI(AGGCCT),styI(CCWWGG),swaI(ATTTAAAT),
xcmI(CCANNNNNNNNNTGG)

EXHIBIT B

[redacted]

ASY92

Assay Name	Mouse Messengial Cell proliferation Assay
Alias Name	Mu Mess Cell Prolif
Status	Retired
Class	Primary
Format	96 Well
Type	Cell
Sample Requirements	
Assay Volume	0.1 ml
Fold DR Into Well	10 Fold
Replicates	3
Dilutions	2
Volume Requested	0.03ml/well/conc
Protocol	
Species	Mouse
Purpose	Screen SPDI proteins which can stimulate Messengial Cell Proliferation
Protocol	On day 1: Mouse messengial cells are plated on a 96 well plate in Media[A 3:1 mixture of Dulbecco's modified Eagle's medium and Ham's F12 medium- 95%- fetal bovine serum-5%- supplemented with 14mM hepes] and grw overnight. On day 2: SPDI Proteins are diluted at 2 conc. [1%- 0.1%] in serum-free Media and added to the cells. On day 4: After 48 hours incubation- each well of the plate was added 20 µl of the Cell Titer 96 Aqueous one solution reagent [Promega] and colormetric reaction was allowed for 2 hours. The absorbance [OD] is measured at 490 nm.
Matrix	Promega kit for the assay-
Result Calculation	replicated average
Result Interpretation	Any PIN that gives an absorbance reading which is 15% above the media control is considered a hit.
Result Cutoff	> 15 %
	In Vivo: InVitro:
Comments	
Status	
Date Entered	
Date Canceled	
Department	Endocrinology
Scientist	James (Guohua) Pan
Notebook	0-
Assayers	

Status	Retired
Cancel Reason	
Bioarea	Endocrinology
Lab Scientist	Weiguang Mao

GenenGenes | Additional Resources:

Gene Viewer | Sequence Viewer | Assay Viewer

DNA | FAM | MAP | GenenGenes

UNQ | SRC | PIN | LIB | PUB | OLI

PRO | DOM | EXP | PUR | LOT | ASY

● Find ○ New ○ Update

SELECT

[redacted]

Assay Viewer

SPDI Assays

ASY1 Heart Neonatal Hypertrophy
ASY2 Heart Adult Hypertrophy
ASY3 Adipocyte Lipolysis
ASY4 Adipocyte Lipogenesis
ASY5 Hematopoiesis: stem cell proliferation
ASY6 Hippocampal Neuron Survival
ASY7 Retinal Neuron Survival (5-6 days cultur
ASY8 Endothelial cell proliferation
ASY9 Inhibition of VEGF stimulated endothelia
ASY10 Eosinophil degranulation (induction of
ASY11 B cell IgE synthesis inhibition

Find Lots

All PIN
All DNA

Show Lots for:
PIN
Number:
1205

☐ Include UNQ Related Lots

Lots for Search

PIN1205-1

☑ All Positives ☐ Verified Positives ☐ Pending

Date Complete From [ ] To [ ]

ASSAY RESULT LIST

Rows 1 - 2 of 2 | Page 1 of 1 | Select Page Page No. 1

ASY	ASY Name	PUR/EXP/DNA	LOT	LOT Name	Pos	Verified	Conc	Conc Unit	Mean	Ctrl	UNQ	Protein Name	Date Distr	Date Complete	Comment
ASY92	Mu.Mass Cell Prolif	PUR1715	LOT2447	PIN1205-1			0.10	%	1		UNQ1915	Human DPKL1915 IgG			
ASY92	Mu Mass Cell Prolif	PUR1715	LOT2447	PIN1205-1			1.00	%	1		UNQ1915	Human DPKL1915 IgG			

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRG | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback